

REMARKS

This responds to the Office Action mailed on August 1, 2006. By this response, no claims have been amended or added. Claim 70 was canceled. As a result, claims 32-37, 39-45, 69 and 70 are now pending in this application. Applicant respectfully requests reconsideration of the application in view of the following remarks.

§112 Rejection of the Claims

Claim 71 was rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

By this amendment, claim 71 has been canceled thereby obviating this rejection.

§103 Rejection of the Claims

A. Rejection: Claims 32-37, 39-45, and 71 were rejected under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612).

B. Response: In order for the Examiner to establish a prima facie case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference or references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. M.P.E.P. § 2142 (citing In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Claim 32 recites "A method comprising: forming a via in a substrate; and forming an electrical component in the via in the substrate, wherein the electrical component includes at least a portion of memory." The Crockett et al. reference fails to teach or suggest forming an

electrical component which includes at least a portion of memory. Crockett et al. is not directed toward a memory device. According to the Summary section of the Crockett et al. reference, “The problems outlined above may at least in part be solved in some embodiments by embedding an electrical component within a via of the printed circuit board to reduce the impedance within the reference path and/or saving space within the printed circuit board.” (See paragraph [0007] of Crockett et al.) Similar language also appears in the Detailed Description of the Crockett et al. reference (See end of paragraph [0018] of Crockett et al.) The Examiner argues that Crockett et al. teaches forming an electrical component within a via (see page 3 of the Office Action dated August 1, 2006). Memory portions or a memory devices are not mentioned in the Crockett et al. reference as revealed by an electronic search on the USPTO website. In actuality, the Crockett et al. reference’s solution is directed toward components or a device for impedance matching or reduction rather than a memory device or a memory portion of the claimed invention. The components generally used to reduce or match impedance are capacitors and resistors. Resistors are used to match loads to which a transmission line is attached and capacitors are used to shift the phase of such transmission lines. The components used to reduce or match impedance are not used to hold or store information, as would a memory component or a portion of memory device which is used to hold or store information. Simply because a memory device and an impedance matching or reduction device may have components in common, it does not follow that the Crockett et al. reference teaches a portion of a memory device since the reference fails to even mention a memory device. As a result, the prior art reference fails to teach or suggest all the claim limitations.

The Examiner also fails to set forth a reason for modifying the impedance matching or reduction device of Crockett et al. reference to yield applicant’s claimed invention. The Examiner only seems to argue that it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that a memory device “...has structural layers or circuit layers, which embed large numbers of capacitors, diodes, inductors or pins in addition to their millions of transistors in order to operate a memory circuit portion...” (see page 4 of the Office Action dated August 1, 2006). Realizing that another type of circuit is also formed from millions of different components is not a reason for modifying the reference. Therefore, Crockett et al. fails to teach or suggest invention of claim 1. As a result, the rejection of claim 32

is now overcome the Examiner's rejection under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612).

Claims 33- 37 and 39-44 depend from claim 32 and include the limitation of claim 32 by their dependency. Therefore, claims 33- 37 and 39-44 also overcome the Examiner's rejection under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612).

Claim 45 recites "A method comprising: forming a via in a substrate; and forming at least a portion of a transformer within the via." The Examiner seems to set forth about the same argument as set forth with respect to claim 1. Namely that since one of ordinary skill in the art to realize that transformers are made from many kinds of "...structural layers or circuit layers, which embed many capacitors, diodes, inductors or pins in addition to there windings and cores in order to operate a transformer portion..." it would have been obvious to move some of those components out of the layers and into a via and also change the nature of the type of circuit. Again, merely realizing another type of circuit is made of components is not sufficient basis for a reason to modify an impedance matching or reducing device to a transformer or portion of a transformer. There is no basis for the modification especially in light of the fact that the Crockett et al. reference is directed toward reducing or matching impedance and fails to mention a transformer. Accordingly, the rejection of claim 45 is now overcome the Examiner's rejection under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612).

Claim 71 has been cancelled by this response thereby obviating the rejection of that claim under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612).

In addition, the Examiner rejected claims 32-37, 39-45, and 71 based solely on the Crockett et al. reference. Applicant respectfully traverses the single reference rejection under 35 U.S.C. § 103 since not all of the recited elements of the claims are found in the Crockett et al. reference. Since all the elements of the claim are not found in the Crockett et al. reference, Applicant is concerned that the Examiner may be taking official notice of the missing elements. Applicant respectfully objects to any taking of official notice with a single reference obviousness rejection and, pursuant to M.P.E.P. § 2144.03, Applicant respectfully traverses any assertion of Official Notice and requests that the Examiner cite a reference or references in support of this position.

C. Rejection: Claims 42-44 and 69-70 were rejected under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612) in view of Figueroa et al. (U.S. 6,446,317).

D. Response: In order for the Examiner to establish a prima facie case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference or references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Claims 42-44 depend from claim 32 and include the limitations of claim 32 by their dependency. The Crockett et al. reference fails to teach a memory device or portion thereof. The Figueroa et al. reference also fails to teach this aspect of the invention. As a result, claims 42-44 overcome the Examiner's rejection for the same reasons as set forth above since neither Crockett et al. or Figueroa et al., when combined, teach the memory device or portion of the memory device aspect of the claim.

Claim 69 recites "...forming a first curved plate portion; and forming a second curved plate portion spaced from the first curved plate portion, wherein the distance between the first curved plate portion and the second curved plate portion vary." The structure of Crockett et al. fails to teach a first curved plate portion and a second curved plate portion. The structure of Crockett et al. shows a lined via (tubular in shape) with a cylindrical or somewhat cylindrical core. Figueroa et al. shows a similar structure (FIG. 4 of Figueroa is a cross sectional view of such a structure). Therefore, neither reference shows a capacitor made of two curved plates. Even if one was somehow able to successfully argue that a tubular structure is a first curved plate, the cylindrical core or somewhat cylindrical core could not be equated to the second

curved plate. Simply put, the combination of Crockett et al. and Figuerora et al. falls short of the structure of claim 69. There appears to be no reason stated for modifying these references to that of the claimed invention. As a result, claim 69 overcomes the rejection under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612) in view of Figueroa et al. (U.S. 6,446,317).

Claim 70 recites forming a first curved plate portion; and forming a second curved plate portion spaced from the first curved plate portion, wherein the first curved plate portion and the second curved plate portion are portions of a via formed by insulating the first portion of a via from a second portion of a via.” This recitation is similar to the recitation in claim 69. The arguments set forth above with respect to claim 69 are equally applicable to this claim. Accordingly, claim 70 overcomes the rejection under 35 USC § 103(a) as being unpatentable over Crockett et al. (U.S. 2002/0100612) in view of Figueroa et al. (U.S. 6,446,317).

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6977 to facilitate prosecution of this application.

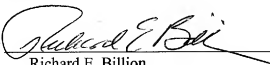
If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

TODD B MYERS ET AL.

By their Representatives,
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
Attorneys for Intel Corporation
P.O. Box 2938
Minneapolis, Minnesota 55402
(612) 373-6977

Date 9/28/06

By 
Richard E. Billion
Reg. No. 32,836

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 28th day of September 2006.

Amy Moriarty
Name


Signature